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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/611,729	07/01/2003	John Frederick Graf	RD-29412	6131

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EXAMINER

BISSETT, MELANIE D

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 05/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/611,729

Applicant(s)

GRAF ET AL.

Examiner

Melanie D. Bissett

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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1. The prior art rejections from the previous Office action have been maintained. However, the claimed indicated as allowable in the previous Office action have been included in a new prior art rejection.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-33 are rejected under 35 U.S.C. 102(e) as being anticipated by Asthana et al.

The applied reference has a common assignee with the instant application.

Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

4. Asthana discloses multilayer articles comprising a resorcinol arylate polymer, a substrate, and a tie layer (abstract). Both the coating layer and substrate layer may contain pigments or fillers [0020; 0025]. Substrate layers include pre-formed glass,

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ceramics, metals, or resins [0028]. Asthana specifically discloses laminates of a polycarbonate substrate, a PMMA tie layer, and a resorcinol arylate polyester coating layer [0065-0073]. Because the materials are the same as those claimed, it is the examiner's position that the layers inherently possess the claimed refractive index properties. Since the laminates are applied to additional substrates [0043], the reference teaches an interlayer (one substrate) disposed between the intermediate layer and another substrate. The articles are formed by the claimed methods [0094] and used in the claimed applications [0082].

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
6. Claims 1-10, 12-23, 25-29, and 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brunelle et al. in view of Ringler et al.
7. From a prior Office action:

Brunelle discloses thermally stable polymers of resorcinol and dicarboxylic acids (abstract). The dicarboxylic acids are preferably terephthalic acid, isophthalic acid, or mixtures thereof (col. 4 lines 47-56). The materials form surface coatings for multi-layer structures, where the multi-layer structures contain a substrate layer, an intermediate layer, and the polyester outer layer (col. 18 lines 7-33). Polycarbonates are preferred substrate materials (col. 18 lines 57-64), and intermediate layers include any of those substrate or coating materials mentioned (col. 21 lines 20-30). Note that polymethyl methacrylate (PMMA) materials are noted as suitable substrate materials (col. 19 lines 24-34). However, the reference does not specifically show PMMA materials between a polycarbonate layer and the thermoplastic polyester layer or teach the refractive indices of these layers. Ringler teaches that the optical properties, including transparency, of polycarbonate articles can be improved by coating with PMMA (col. 2 line 38-col. 3 line 4; col. 4 lines 6-15; example 1). Thus, it is the examiner's position that it would have been prima facie obvious to treat the polycarbonate layer of Brunelle's invention with PMMA before coating with the

polyester surface coating to improve the transparency of the polycarbonate layer. Since the applicant has taught PMMA as having a refractive index of about 1.49 and has taught the same polyester materials for the surface film, it is the examiner's position that the article of the combined references would possess the claimed refractive index properties.

Regarding the addition of colorants or fillers, Brunelle teaches that the interlayer, substrate, and surface layer may contain colorants or decorative fillers (col. 18 lines 25-28; col. 19 lines 65-67; col. 17 lines 30-41). Regarding the formed articles of the invention, Brunelle teaches the claimed applications (col. 22 lines 8-55). Such applications would require applying the multi-layer material to a second substrate. The articles are formed by coextrusion, overmolding, multi-shot injection molding, etc. (col. 21 lines 30-42).

Response to Arguments

8. In response to the applicant's arguments that there is no motivation or guidance from the references to provide a multilayer article having transparent layers, where one layer has an index of refraction lower than the other, it is the examiner's position that the primary reference teaches the outer layer and polycarbonate substrate claimed by the applicant. The secondary reference teaches that it would be beneficial to form a PMMA coating on polycarbonate substrates to improve the transparency of the polycarbonate layer. Thus, it is the examiner's position that it would have been *prima facie* obvious to use a PMMA-coated polycarbonate substrate in the invention of the primary reference to form laminates having improved transparency. Note that the materials are the same as those employed by the applicant; thus, the refractive index values and transparency properties would be the same. Also note that the primary reference teaches the outer coatings' application to PMMA substrates.


9. Regarding the applicant's argument that unexpected results have been shown, it is noted that the examples are not commensurate in scope with the claims. The examples show only one type of material used for each layer. A specific resorcinol

arylate polyester is used for the outer layer, PMMA is used as the intermediate layer, and a specific polycarbonate is used for the substrate layer. This does not represent the scope of the claims, which encompass any substrate, any intermediate layer, and any polyester surface film. The examples do not show a trend to suggest that the benefit is unexpected throughout the claimed scope. Also, since the secondary reference teaches that weathering properties are improved by the use of PMMA coatings, one would expect the laminates to have improved weathering properties.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie D. Bissett whose telephone number is (571) 272-1068. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Melanie D. Bissett

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Patent Examiner
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